19. Discuss normalization from BCNF with suitable examples.

20. Explain in detail PL/SQL procedure, functions, and triggers with syntax and examples.

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NOVEMBER/DECEMBER 2025

23UIM31 — RELATIONAL DATABASE MANAGEMENT SYSTEM

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

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1. Define a database.

2. List any two advantages of DBMS approach.

3. Define schema.

4. What are the unary relational operations available in RDBMS?

5. Define attributes in ER model.

6. State the key characteristics of weak entity type.

7. Define normalization.

8. What is the concept of relations in RDBMS?

9. What is PL/SQL?

10. List any two types of SQL constraints.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Explain the characteristics of the database approach.

Or

(b) Differentiate data model, schema and instance.

12. (a) Explain the JOIN operation with a suitable example.

Or

(b) Write about relational constraints.

13. (a) Construct an ER diagram for a student-course database system.

Or

(b) Explain weak entities and their mapping into relations.

14. (a) Describe 1NF, 2NF and 3NF with examples.

Or

(b) Elaborate the functional dependencies with example.

15. (a) Write a SQL query to find the names of employees earning more than 50,000.

Or

(b) Explain the advantages of using stored procedure in PL/SQL.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the three-schema architecture in detail with a neat diagram.

17. Illustrate relational algebra operations with examples.

18. Design an ER model for a hospital management system and map it into relations.

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